

CONTROL DATA® 881 DISK PACK

CONTROL DATA
CORPORATION



The CONTROL DATA 881 Disk Pack is a removable, high-density, multiple disk, data storage pack designed for use with the CDC® 844-2 and 844-21 Disk Storage Units (DSU) or equivalent. The 881 consists of 11 oxide-coated disks and a sector disk which are stacked vertically. Oxide-coated disks provide 19 recording surfaces and one prerecorded servo-positioning surface plus a protective cover disk. The sector disk contains 24 equally spaced radial slots and an index slot which allow a sensor on the disk storage unit to monitor disk speed and position.

A specially developed spin coating process is employed in producing the 881 Disk Packs. This process insures uniformity in disk coating thickness and surface finish, and provides outstanding constant-amplitude characteristics plus high-resolution performance. Great care is taken during manufacture to prevent mar-prone or dusty disk surfaces, out-of-round disks, and other imperfections in the disk surface.

All 881 Disks Packs are factory formatted. That is, data tracks are formatted by sector, with appropriate head-gaps, sync patterns, address tag fields, and data check words.

The disk pack is enclosed by top and bottom covers when not in use. The top cover contains a handle which is used in lifting and loading the disk pack into the DSU. Clockwise rotation of the handle secures the disk pack to the DSU and releases the transparent top cover. The bottom cover is attached to the pack by a squeeze-release latch.

SPECIFICATIONS

Part Number: 89273901

Operating Speed: 3600 rpm (± 72 rpm)

Number of Disks: 10 recording disks, 1 sector and 1 cover disk

No. of Recording Surfaces: 19 data surfaces, 1 prerecorded servo-positioning surface

Base Material: Aluminum, oxide coated

Pack Balance: Balanced within 4 in. gm in each of two planes parallel to disk surfaces

Recording Mode: Saturation

Recording Capacity: Each recording surface can contain up to 411, 24-sector primary data tracks

Track Density: 192 tracks per inch (Approx.)

Bit Density: 4320 bits per inch (Max.)

Data Rate: 6.8 megabits per second, nominal

Magnetic Characteristics: Oxide used in the magnetic recording surface has the following magnetic characteristics when measured in a field of 1000 oersteds:

Coercivity (HC) 285-305 Oersteds

Saturation (Bm) 3300-3500 Gauss

Residual Saturation (Br) 1750-1900 Gauss

Disk Surfacing: Each recording disk is burnished to ensure that the surface is free of irregularities or protrusions which could cause head-to-disk interference if heads are flown at minimum spacing of 40 micro inches

Surface Durability: Magnetic coating is compatible with Control Data or equivalent read/write heads used in the CDC 844 Series DSUs operated within specified environments. Coating will not chip, peel, or adversely affect read/write heads in normal operation and will withstand 50,000 head loadings

Read Error: The following acceptance criteria apply to each disk pack:

- No errors of any type in the format field, data field, or data-check field in any sector at cylinder 000, surface 00 and no errors at Cylinder 410, surface 00, sectors 0, 1 and 2.
- Not more than 16 tracks with non-correctable track errors.
- Not more than 45 sectors with non-correctable sector errors.
- Not more than 45 correctable error sectors.

Locking Force: Disk pack is held to the disk drive spindle by a force of 325 (± 25 pounds)

Registration Allowance: Machine allowance for radial track misregistration due to misfit between disk and spindle, dirt particle, etc., is ± 0.0002 inch

Materials: Material and construction of the disk pack meets all dimensional, inertial and functional operating requirements

Dimensions/Weight —

Recording Disk Diameter: 14.025 inches

Recording Disk Thickness: 0.075 inch (± 0.001 in.)

Sector Disk Diameter: 14.188 (± 0.0050) inches

Overall Height: 7.06 inches

Weight (without covers): Less than 16 pounds

Environmental —

Operating Temperature: 60°F to 135°F

Operating Humidity: 8% to 80% R.H.

Non-operating Temperature: -30°F to +150°F

Non-operating Humidity: 8% to 80% R.H.

Specifications subject to change without notice